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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/890,570	09/25/2001	Geroge Roland Hill	P268453	4578

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Pillsbury Winthrop LLP
1600 Tysons Boulevard
McLEAN, VA 22102

EXAMINER

LORENZO, JERRY A

ART UNIT	PAPER NUMBER
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1734

DATE MAILED: 11/10/2003

16

Please find below and/or attached an Office communication concerning this application or proceeding.

22016

Office Action Summary	Application No.	Applicant(s)	
	09/890,570	HILL ET AL.	
	Examiner	Art Unit	
	Jerry A. Lorengo	1734	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 August 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11, 14-16 and 20-25 is/are rejected.
- 7) ☒ Claim(s) 12, 13 and 17-19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>15</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

(1)

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-7, 10, 14, 16 and 20-22 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 4,673,609 to Hill.

Regarding applicant claims 1 and 22, Hill discloses a method of imaging a substantially uniform surface of an imperforate substrate comprising the steps of (column 9, line 67 to column 10, line 15):

(1) Providing an imperforate substrate having a substantially uniform surface, such as glass (column 1, lines 10-23);

(2) Providing a base layer, i.e., a carrier sheet formed of paper (column 9, lines 67-68) which, being paper, would have substantially different material property from a substrate formed of glass;

(3) Applying a first and second continuous superimposed layers of marking material (such as ink two sheets of colored film laminated thereto; or a single sheet of film printed to provide different colors;

(4) Removing unwanted portions of the superimposed layers of marking material disposed and supported on the carrier sheet to form a pattern by kiss die cutting (a means of force selectively applied);

(5) Transferring the patterned superimposed layers of marking material from the carrier sheet to the surface of the imperforate substrate; and

(6) Removing the carrier paper leaving the pattern on the substrate with clear transparent areas between the elements of the pattern.

Regarding applicant claim 2, Hill discloses that at least two layers of marking material are transferred from the base layer (carrier sheet) to the substrate (column 10, lines 2-5).

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Regarding applicant claims 3, Hill discloses that the application of force is applied by kiss die cutting, which, by its very nature, would apply force to the marking material remote from the carrier sheet.

Regarding applicant claim 4, Hill discloses that the marking material is transferred from the carrier sheet to the substrate by contacting (pressing) the marking material carried on the carrier sheet with the surface of the substrate (column 10, lines 8-12).

Regarding applicant claims 5 and 6, Hill discloses that the carrier sheet can function as a decal carrier whereby the marking layer are applied as film (decal) layers laminated thereto followed by removal of unwanted portions by kiss die cutting to form a decal carrier having a pattern of superimposed decal film layers forming a pattern which is transferred from the decal carrier sheet to the substrate by contacting (pressing) the decal pattern carried on the decal carrier sheet with the surface of the substrate (column 10, lines 2-15).

Regarding applicant claim 7, Hill discloses that the substrate may be transparent glass and that the layers of marking material may comprise a first and second color whereby upon transfer of the marking material pattern from the carrier to the transparent substrate, one color is visible from one side of the substrate but not from the other side (Figure 6; column 2, lines 23-49).

Regarding applicant claim 10, Hill discloses that the force applied to superimposed layers of marking material disposed on the carrier sheet is a cutting force (kiss die cutting) such that the layers of marking material are cut along a common boundary of the print pattern (Figure 25; column 3, lines 10-57).

Regarding applicant claims 14 and 20, Hill discloses, as shown in Figures 2 and 3, that the substrate has a primary surface to which the marking material is applied and is uniform plane.

Regarding applicant claim 16, Hill discloses that the carrier sheet may comprise paper, which, by its very nature, has a substantially different chemical composition than that of the substrate which may be glass.

Regarding applicant claim 21, Hill discloses that the glass substrate may comprise a vehicle window assembly, which, in the case of a front or back window, would have a surface of single curvature (column 8, lines 56-65).

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(2)

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,673,609 to Hill in view of U.S. Patent No. 4,321,778 to Whitehead.

Regarding applicant claim 1, Hill discloses a method of imaging a substantially uniform surface of an imperforate substrate comprising the steps of (column 9, line 67 to column 10, line 15):

(1) Providing an imperforate substrate having a substantially uniform surface, such as glass (column 1, lines 10-23);

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(2) Providing a base layer, i.e., a carrier sheet formed of paper (column 9, lines 67-68) which, being paper, would have substantially different material property from a substrate formed of glass;

(3) Applying a first and second continuous superimposed layers of marking material (such as ink two sheets of colored film laminated thereto; or a single sheet of film printed to provide different colors;

(4) Removing unwanted portions of the superimposed layers of marking material disposed and supported on the carrier sheet to form a pattern by kiss die cutting (a means of force selectively applied);

(5) Transferring the patterned superimposed layers of marking material from the carrier sheet to the surface of the imperforate substrate; and

(6) Removing the carrier paper leaving the pattern on the substrate with clear transparent areas between the elements of the pattern.

Although Hill discloses that the base layer comprises a carrier sheet, he does not specifically disclose, as per applicant claim 15, that the primary surface of the base layer comprises a plurality of materials.

Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to utilize such a base layer in the method of Hill motivated by the fact that Whitehead, also drawn to methods of imaging a substantially uniform surface of an imperforate substrate, discloses that it is known to utilize a base layer comprised of a plurality of materials. Specifically, Whitehead discloses that the base layer comprises a carrier layer on to which is applied a layer of lacquer, upon which the layers of marking material are disposed. Whitehead teaches that such a lacquer layer allows the layers of marking material to be released from the carrier paper of the base layer while ensuring that the layers of marking material are supported during transfer by the layer of lacquer which releases from the carrier paper along with the layers of marking material (column 2, line 50 to column 3, line 2).

(3)

Claim 24 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,673,609 to Hill in view of U.S. Patent No. 4,321,778 to Whitehead.

Regarding applicant claim 24, Hill discloses a method of imaging a substantially uniform surface of an imperforate substrate comprising the steps of (column 9, line 67 to column 10, line 15):

(1) Providing an imperforate substrate having a substantially uniform surface, such as glass (column 1, lines 10-23);

(2) Providing a base layer, i.e., a carrier sheet formed of paper (column 9, lines 67-68) which, being paper, would have substantially different material property from a substrate formed of glass;

(3) Applying a first and second continuous superimposed layers of marking material (such as ink two sheets of colored film laminated thereto; or a single sheet of film printed to provide different colors;

(4) Removing unwanted portions of the superimposed layers of marking material disposed and supported on the carrier sheet to form a pattern by kiss die cutting (a means of force selectively applied);

(5) Transferring the patterned superimposed layers of marking material from the carrier sheet to the surface of the imperforate substrate; and

(6) Removing the carrier paper leaving the pattern on the substrate with clear transparent areas between the elements of the pattern.

Hill, however, does not specifically disclose, as per applicant claim 24, that the base layer is left on the substrate after contact of the marking materials carried on the carrier paper with the surface of the substrate such that the base layer is removed by being burnt off in a glass-tempering regime.

Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to do so motivated by the fact that Whitehead, also drawn to methods of imaging a substantially uniform surface of an imperforate substrate, discloses that it is known to provide a base layer comprised of a plurality of material layers such that a portion of the base layer (a layer of lacquer applied on the carrier paper before disposal of the marking layers thereon) may follow

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the layers of marking material as they are applied to the surface of the substrate and which is burnt off of the substrate in a glass temperature regime leaving the layers of marking material on the surface of the substrate (column 2, line 50 to column 3, line 2; and specifically column 3, lines 3-13).

(4)

Claims 1, 8, 9, 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,321,778 to Whitehead in view of U.S. Patent No. 1,199,882 to Frey.

Regarding applicant claim 1, Whitehead discloses a method of forming an imperforate transmuted substrate having a print pattern on its surface comprising the steps of:

- (1) Providing a starting substrate (base layer) of glass;
- (2) Providing the surface of the starting substrate with a pattern of superimposed layers of marking materials; and
- (3) Transmuting the starting substrate into a final substrate by heating in a tempering regime such that the starting substrate of glass is transmuted into a tempered glass (which would have a substantially different material property than the starting substrate) and whereby the superimposed layers of marking material are fused into the tempered glass surface (column 2, line 43 to column 3, line 15).

Although Whitehead discloses that the superimposed layers of marking material are disposed on the starting glass substrate surface as a pattern, they do not specifically disclose, as per applicant claim 1, that the superimposed layers of marking material are applied as at least two initial, continuous, superimposed layers of marking material, followed by removal of portions of the layers of marking material to form a pattern by means of a force applied selectively to the marking material while it is supported on the starting substrate.

Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Whitehead to provide the two layers of marking material on the substrate in a continuous manner motivated by the fact that Frey, also drawn to methods of forming a one-way vision panel (a mirror), discloses that it is known to apply at least two layers of marking material 2,3 in a continuous manner across the surface of a glass panel 1 followed by the removal of portions of the marking material by a force, i.e., graving, selectively applied to

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the two layers of marking material while it is supported by the glass panel 1 (Figures 1-3; page 1, column 1, lines 31-48).

Regarding applicant claims 8 and 9, Whitehead discloses that the starting substrate is transmuted into the final substrate by the application of thermal energy.

Regarding applicant claim 11, Frey discloses that the force applied is done by graving, i.e., a scraping force.

(5)

Claim 25 is rejected under 35 U.S.C. 103(a) as being unpatentable over the references as combined in section (4), above, in further view of U.S. Patent No. 4,673,609 to Hill.

Although the references as combined in section (4), above, disclose that the layers of marking material disposed on the starting substrate may be removed by application of a graving (scraping) force applied to the layers of marking material while they are supported on the starting substrate, they do not specifically disclose, as per applicant claim 25, that the removal is accomplished by pre-cutting with incisions followed by removal of portions of the layers of marking material between the incisions.

Hill, however, also drawn to methods for the patterning of transparent substrates in the formation of one-way vision panels, disclose that it is possible to form a patterns in layers of superimposed marking materials by removing unwanted portions of the superimposed layers of marking material to form a pattern by kiss die cutting which is a means of force selectively applied using incisions and "weeding" (column 9, line 67 to column 10, line 15).

It would have been obvious to one of ordinary skill in the art at the time of invention to substitute the method of Hill with the graving method of Frey motivated by the fact that Hill discloses that such methods (pre-cutting and weeding versus graving, i.e., abrading) are functional expedients within the art (column 8, line 66 to column 9, line 3; column 11, line 53 to column 12, line 21).

(6)

Claim 23 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 4,673,609 to Hill in view of U.S. Patent No. 1,199,882 to Frey.

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Regarding applicant claim 23, Hill discloses a method of imaging a substantially uniform surface of an imperforate substrate comprising the steps of (column 9, line 67 to column 10, line 15):

(1) Providing an imperforate substrate having a substantially uniform surface, such as glass (column 1, lines 10-23);

(2) Providing a base layer, i.e., a carrier sheet formed of paper (column 9, lines 67-68) which, being paper, would have substantially different material property from a substrate formed of glass;

(3) Applying a first and second continuous superimposed layers of marking material (such as ink two sheets of colored film laminated thereto; or a single sheet of film printed to provide different colors;

(4) Removing unwanted portions of the superimposed layers of marking material disposed and supported on the carrier sheet to form a pattern by kiss die cutting (a means of force selectively applied);

(5) Transferring the patterned superimposed layers of marking material from the carrier sheet to the surface of the imperforate substrate; and

(6) Removing the carrier paper leaving the pattern on the substrate with clear transparent areas between the elements of the pattern.

Although Hill discloses that the portions of the superimposed layers of marking material may be removed from the base layer prior to transfer, he does not specifically disclose, as per applicant claim 23, that they are removed from the substrate after transfer.

Nonetheless, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Hill to provide the two layers of marking material on the substrate in a continuous manner by transfer motivated by the fact that Frey, also drawn to methods of forming a one-way vision panel (a mirror), discloses that it is known to apply at least two layers of marking material 2,3 in a continuous manner across the surface of a glass panel 1 followed by the removal of portions of the marking material by a force, i.e., graving, selectively applied to the two layers of marking material while it is supported by the glass panel 1 (Figures 1-3; page 1, column 1, lines 31-48).

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(7)

Allowable Subject Matter

Claims 12, 13 and 17-19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

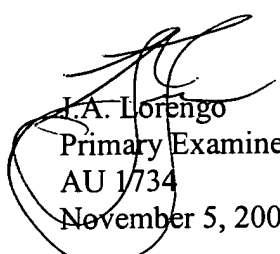
None of the prior art of record specifically teach or suggest a method of imaging a substantially uniform surface of an imperforate substrate wherein portions are removed by the action of a heated profiled roller having recessed portions from an otherwise cylindrical surface or wherein the transfer of the non-removed portions of the marking material are transferred to the substrate from the base by means of a selectively applied suction force.

(8)

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry A. Lorengo whose telephone number is (703) 306-9172. The examiner can normally be reached on Monday through Friday, 8:30 A.M. to 5:00 P.M.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Crispino can be reached on (703) 308-3853. Please note that all patent application related correspondence transmitted by FAX must be directed to the central FAX number at 703-872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.



J.A. Lorengo
Primary Examiner
AU 1734
November 5, 2003